

REMARKS

The Office Action of April 1, 2009 has been reviewed in detail and this paper is responsive thereto. Claims 12-28 are pending. Applicant is amending claims 12, 18, and 24. Claims 12-19 and 24, and 26 stand rejected.

Applicant acknowledges that claims 20-23, 25, 27, and 28 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

No new matter has been introduced into the application. As explained in more detail below, Applicants respectfully submit that all remaining pending claims are in condition for allowance.

Substance of Interview on May 18, 2009

Applicant and Examiner Puente discussed amendments to claim 12 which further distinguish the claimed invention from Arnesen, Persson, and Gurney. Examiner Puente expressed the need to conduct a further search to determine if the amended claim is inventive.

Claim Rejections Under 35 USC §103

Claims 12-15, 18 and 24 are rejected under 35 USC §103(a) as being unpatentable over US Publication No. 2003/0026201 (Arnesen) in view of US Patent No. 6,587,500 (Persson).

Regarding independent claim 12, Applicant is amending independent claim 12 to include the feature of “continuing comparing the bit stream with the expected bit sequence during prepared or started data extraction to determine a new correlation value.” The amendment is supported by the specification as originally filed, *e.g.*, Page 11, lines 1-12 (Paragraph 0059 of published patent application).¹ Applicant is similarly amending independent claim 18 to include

¹ The present specification recites “Whenever a new correlation value CorrVal from the packet detector 17 exceeds the registered correlation value MaxCorrVal, while at the same time the state FINISHED has not been reached, while the signal SyncWin is high or 1 the state PACKET FOUND is reentered and MaxCorrVal is set to the new value. I. e., the synchronization process can be restarted in the state PACKET FOUND. **As a consequence the synchronization unit can continue with scanning for access codes while data extraction is already prepared or even started.** In case the correlation value CorrVal indicates a higher level of confidence (higher correlation value CorrVal) compared to the last packet detection, the synchronization process is restarted. So far extracted data is

the feature of “a packet detector configured to compare a bit stream derived from a received digital data stream with an expected bit sequence to determine a correlation value for detecting a data packet, the packet detector comprising means for continuing to compare the received bit stream with the expected bit sequence during prepared or started data extraction to determine a new correlation value.” Applicant is also amending independent claim 24 to include the feature of “a packet detector configured to compare a bit stream derived from a received digital data stream with an expected bit sequence to determine a correlation value for detecting a data packet, the packet detector further configured to continue comparing the received bit stream with the expected bit sequence during prepared or started data extraction to determine a new correlation value.”

Arnesen and Persson, either individually or in combination, fail to suggest the above features. Regarding claim 12, the Office Action alleges that Arnesen discloses (Page 4):

... continuing comparing the bit stream with the expected bit sequence (it is inherent that correlation process is repeated for each packet extraction; 1202); ...

However, Arnesen merely suggests that the packet-header detector 1202 detects a packet preamble while symbol extraction is not performed. During symbol extraction, the packet-header detector 1202 is not operated to detect a packet preamble. The packet-header detector 1202 is set into operation again upon reception of the end-of-packet output from the frame module/packet framer 1204. In further context of the subject matter of claim 12, it is immediately understood as well that the “restarting data extraction from the bit stream when the new correlation value exceeds the stored maximum correlation value” is performed during an already started data extraction process once a new correlation value exceeds the stored maximum correlation value because the new correlation value is obtained during an already started data by “continuing comparing the bit stream with the expected bit sequence during prepared or started data extraction to determine a new correlation value.”

Persson fails to remedy the deficiencies of Arnesen. Persson merely discusses the comparison of a correlation value with a variable threshold value. (Page 2, line 66 – page 3, line 9.) Furthermore, the teaching of Arnesen as modified by Persson would result in an infeasible solution. For this purpose, the Examiner’s allegations should be assumed, *i.e.*, that “starting data

rejected. Restarting of the synchronization process may be called multiple syncfound.” (Page 11, lines 1-12. Emphasis added.)

extraction” would correspond to the start-of-packet command sent by the packet-header detector 1202 to the symbol detector 1203 and “restarting data extraction” would correspond to the same start-of-packet command sent by the packet-header detector 1202 to the symbol detector 1203, when a subsequent next data packet is detected (Page 4, section 3). The Office Action further alleges that the correlation process is repeated for each packet extraction; 1202. Now, the updating of the comparator threshold value as allegedly suggested by Persson should be combined with the aforementioned teaching of Arnesen. This means that the packet-header detector 1202 using a correlation process starts outputs a correlation value and detects a first data packet if the outputted correlation value equals or exceeds a predefined correlation threshold value. This predefined correlation threshold is stored after successful detection. When the subsequent next data packet is to be detected by the packet-header detector 1202, the stored correlation threshold is retrieved and the detection is successful if the packet-header detector 1202 using the correlation process outputs a new correlation value, which equals or exceeds the stored correlation threshold. If the outputted new correlation value is stored, it replaces the currently stored correlation threshold. This process is repeated with each next data packet. This means that the correlation threshold maintains the same value or increases but the correlation threshold never decreases. If now by chance the packet-header detector 1202 outputs a (substantially) maximum correlation value, which is then stored as the next correlation threshold, a next data packet will not be detectable any more in the bit stream due to the maximum correlation threshold.

Independent claim 18 includes the similar feature of “a packet detector configured to compare a bit stream derived from a received digital data stream with an expected bit sequence to determine a correlation value for detecting a data packet, the packet detector comprising means for continuing to compare the received bit stream with the expected bit sequence during prepared or started data extraction to determine a new correlation value.” Also, independent claim 24 includes the feature of “a packet detector configured to compare a bit stream derived from a received digital data stream with an expected bit sequence to determine a correlation value for detecting a data packet, the packet detector further configured to continue comparing the received bit stream with the expected bit sequence during prepared or started data extraction to determine a new correlation value.” Thus, claims 18 and 24 are patentable for at least the

above reasons. Moreover, claims 13-15 ultimately depend from claim 12. Applicant requests reconsideration of claims 12-15, 18 and 24.

Claims 16, 17, 19, and 26 are rejected under 35 USC §103(a) as being unpatentable over Arnesen in view of Persson and in further view of US Patent No. 5,619,542 (Gurney).

Claims 16, 17, 19, and 26 ultimately depend from claims 12, 18, and 24. Moreover, Gurney merely describes methods and devices for predicting a symbol timing estimation in a digital radio receiver and fails to remedy the deficiencies of Arnesen and Persson. (Column 1, lines 42-44.) Applicant thus requests reconsideration of claims 16, 17, 19, and 26.

Applicants therefore respectfully request reconsideration of the pending claims and a finding of their allowability. A notice to this effect is respectfully requested. Please feel free to contact the undersigned should any questions arise with respect to this case that may be addressed by telephone.

Respectfully submitted,

Dated: June 16, 2009

By: Kenneth F. Smolik
Kenneth F. Smolik
Registration No. 44,344
BANNER & WITCOFF, LTD.
10 South Wacker Drive, Suite 3000
Chicago, IL 60606
Telephone: 312 -463-5000
Facsimile: 312-463-5001